What is claimed is:

1. A machine-vision system for imaging an object, the object having a first side and a second side, the machine-vision system comprising:

an imager; and

an optics apparatus that images two or more views of the first side of the object without interference from the second side of the object.

2. The system of claim 1, wherein the two or more views of the first side of the object are from orthogonal angles.

3. The system of claim 1, wherein the optics apparatus further images two or more views of the second side of the object and wherein the two or more views of the second side of the object are from different angles.

4. The system of claim 1, wherein the object includes a first major surface, the system further comprising a divider background surface placed at or near the first major surface of the object in order to obtain separate images of features of the object only on the first side of the object and features of the object only on the second side of the object.

5. The system of claim 4, wherein the divider is opaque, the system further comprising:

an LED lighting system that projects light from a plurality of LEDs onto the opaque divider.

6. The system of claim 4, wherein the divider background surface diffuses light to back light the features on the object on the first side and diffuses light to back light the features on the second side of the object.

7. The system of claim 1, wherein the object includes at least a first major surface, the system further comprising a divider background surface that contacts the first major surface of the object in order to obtain separate images of features of the object only on the first side of the object and of features of the object only on the second side of the object.

8. The system of claim 7, wherein the divider is opaque.

9. The system of claim 7, wherein the divider background surface diffuses light to back light the features on the object on the first side and diffuses light to back light the features on the second side of the object.

10. The system of claim 7, wherein the divider is spring loaded to bias the divider against the object when the divider contacts the object..

11. The system of claim 1, wherein the optics apparatus includes an optical path folding optics that at least provides backlit and substantially orthogonal first and second views of the first side of the object and backlit and substantially orthogonal first and second views of the second side of the object, and includes a substantially non-transparent divider background surface placed in a relationship at or near the object in order block, from one of the views of the first side of a portion of the object, some portion of the second side of the object;

the system further comprising:

an LED lighting system that projects light from a plurality of LEDs onto the divider; and

an information handling apparatus connected to the imager in order to receive image information from the imager, wherein the information handling apparatus determines co-planarity information of features of the object using the image information from the first and second views of the first side of the object and

the first and second views of the second side of the object, and outputs data indicative of the co-planarity information.

12. The system of claim 7,wherein the divider includes an edge for contacting the major surface of the object, the edge of the divider initially forming an acute angle with respect to the major surface of the object.

13. The system of claim 12,wherein the divider is biased so that the edge of the divider is substantially in parallel with the major surface of the object after initially forming an acute with the major surface of the object.

14. The system of claim 7, wherein the object is moved both vertically and horizontally with respect to the major surface of the object.

15. The system of claim 14, further comprising a picker for picking and moving objects.

16. The system of claim 1, wherein one of the views of the first side and the second side are within a single image on the imager.

17. The system of claim 16, wherein the single view is a top view of the object showing the first side and the second side of the object.

18. The system of claim 17, further comprising an information-handling system that measures dimensions associated with the top view of the object.

19. The system of claim 7, wherein one of the views of the first side and the second side are within a single image on the imager.

20. The system of claim 19, wherein the single view is a top view of the object showing the first side and the second side of the object.

21. The system of claim 20 further comprising an information-handling system that measures dimensions associated with the top view of the object from the obtained images.

22. A machine-vision system for inspecting an object, the object having a first side and a second side, the machine-vision system comprising:

an imager; and

an optics apparatus that images a top-down view of the object that includes both the first side and the second side of the object, a separate first-side view of only the first side of the object and a separate second-side view of only the second side of the object.

23. The machine-vision system of claim 22, wherein the optics apparatus includes a single camera that obtains the top-down view, the first side view and the second side view.

24. The system of claim 22, wherein the object includes at least one major surface, the machine vision system further comprising a divider background surface placed near the at least one major surface of the object in order to obtain the separate image of the first side of the object and the separate image of the second side of the object.

25. The machine-vision system of claim 22, wherein the optics apparatus further comprises:

a first reflective surface for obtaining the separate view of only the first side of the object; and

a second reflective surface for obtaining the separate view of only the second side of the object.

26. The machine-vision system of claim 22, further comprising:

a base;

at least one spring attaching the divider to the base; and

a picker for picking and moving objects.

27. The machine-vision system of claim 26, wherein the picker moves the object at an angle with respect to an edge of the divider.

28. The machine-vision system of claim 22, wherein the top-down view of the object that includes both the first side and the second side of the object , the separate view of the first side of the object, and the separate view of the second side of the object are backlit.

29. The machine-vision system of claim 22, wherein the top-down view of the object that includes both the first side and the second side of the object , the separate view of the first side of the object, and the separate view of the second side of the object are backlit.

30. The machine-vision system of claim 22, further including a measurement apparatus for determining dimensions on at least one of the top-down view of the object that includes both the first side and the second side of the object, the separate view of the first side of the object, and the separate view of the second side of the object.

31. A method for obtaining a machine-vision image of an object comprising:

blocking a first portion of the object with a first illuminated surface; and

imaging a second portion of the object using back light from the first illuminated surface.

32. The method of claim 31, further comprising:

blocking the second portion of the object with a second illuminated surface; and

imaging the first portion of the object using back light from the second illuminated surface.

33. The method of claim 32, further comprising imaging an outline of at least a portion of the object using back light form a third illuminated surface.

34. The method of claim 32, further comprising:

obtaining digitized image information about the first portion of the object and the second portion of the object;

determining co-planarity information of features the first portion of the object and the second portion of the object using the digitized image information; and

outputting data indicative of the co-planarity information.

35. The method of claim 34, further comprising:

sorting the object into one of a plurality of output groups based on the co-planarity information.